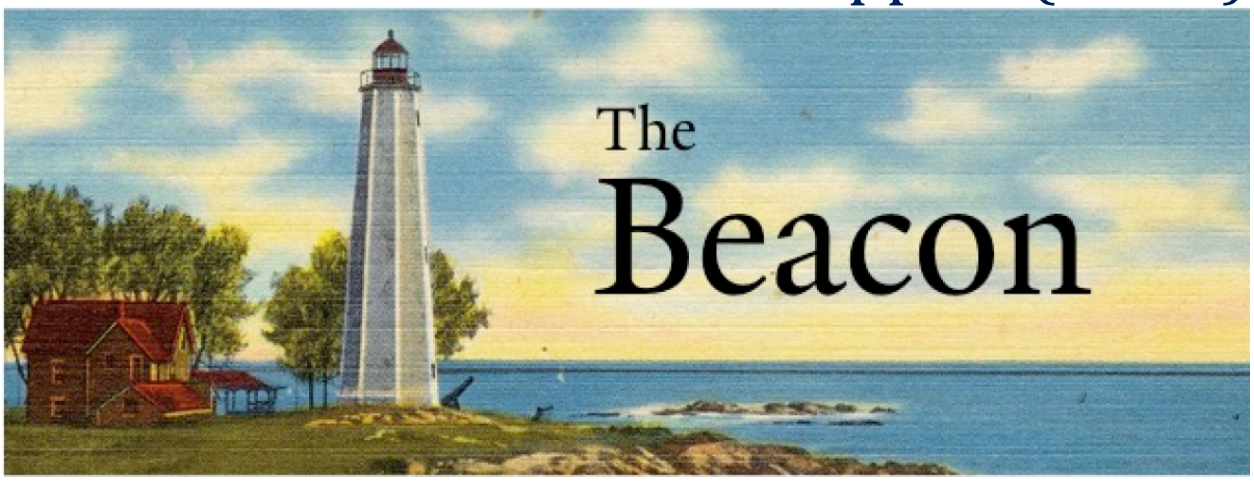
Office of Animal Research Support (OARS)



Announcements & Reminders

2025-2026 IACUC Deadlines and Meeting Dates

Research Liaison Departmental Assignments

Investigators are encouraged to submit protocols that are due for 3-year renewal early to allow time for pre-review by the research liaisons and veterinarians. Early submission helps expedite protocol review and approval. Should you have any questions, please contact OARS.

Upcoming Facility Inspections

January: LSOG1, LSOG2, LSOG4, LSOG5, LSOGB, LSOGSB, MEC, SHM4, SHMIG/BG, TAC, WWW and YSB.

Please contact Shannon Denison if you need further information. Please check your spaces regularly to meet IACUC expectations.

IMPORTANT: Cabinets, drawers, or containers with drugs or materials with expiration dates must be accessible for inspection. If you cannot leave these unlocked (e.g., controlled substances), you must be ready to open them. Contact Shannon Denison to provide your contact information and the relevant areas.

Update your Laboratory Emergency Contacts

To support timely coordination between Veterinary Clinical Services (VCS) and research personnel, all labs are asked to review and update their emergency contact information. Accurate contacts are essential to ensure that VCS can quickly reach the appropriate individuals in the event of an animal welfare concern or facility emergency.

Please submit updated contact information to:

VCSstaff@yale.edu; Stacey.Bowers@yale.edu; Lyn.Moreau@yale.edu

If the IACUC protocol emergency contact changes, please reach out to your Research Liaison to update this information. This can be done administratively and does not require a modification to be submitted.

Labs should also update this information whenever personnel join or leave the lab so that responses to urgent situations are not delayed. Keeping this information current helps safeguard animal welfare and ensures effective collaboration between VCS and the research community.

Updating Personnel in MAPS

We understand that keeping up with frequent personnel changes can be challenging. However, it's essential for YARC and VCS staff, who are responsible for caring for your animals, to have accurate and up-to-date contact information for members of your lab. To make this process easier, here is a link to a step-by-step Guide for Personnel Changes to help you efficiently manage updates within your lab. Please take this opportunity to have someone in your lab assure consistency with personnel listed on the protocol (on the **personnel page** and in the **special instruction** section) and those members of the lab who use animals.

Help Shape the Future of Compassion Fatigue Support

The CREW (Compassion, Resilience, Empathy, and Wellness) team is seeking your feedback on our current Compassion Fatigue Program. Your input is vital in helping us understand the community's needs and guiding future program development. Please take a few moments to complete this brief, anonymous survey and share your thoughts and suggestions. https://yalesurvey.ca1.qualtrics.com/jfe/form/SV_2cmzSXfp3OBVA1M

Discontinuation of 20mg/mL Xylazine Formulation and SOP Revisions

Please note that the 20mg/mL formulation of Xylazine has been discontinued by the manufacturer.

MAPS will be updated to correct the dose section within the Ketamine + Xylazine anesthetic drug building block. This change will automatically update all protocols that utilize the standardized Ketamine + Xylazine building blocks, ensuring consistency within the revised SOPs.

Investigators and research staff are encouraged to review the below updated dilution procedure prior to your next use to ensure compliance with the new formulation.

Preparation of diluted ketamine/xylazine (Mouse Cocktail)

To a sterile 10ml vial add:

- 0.5 ml ketamine (100mg/ml), 0.05 ml xylazine (100mg/ml), and 4.45 ml sterile saline

Label the vial with the following:

- Concentration of each drug (ketamine 10 mg/ml; xylazine 1 mg/ml).
- Expiration date (28 days after preparation).
- Working solution Unique Identifier

Preparation of diluted ketamine/xylazine (Rat Cocktail)

To a sterile 10ml vial add:

- 7.5 ml ketamine (100mg/ml), 0.5 ml xylazine (100mg/ml), and 2.0ml sterile saline

Label the vial with the following:

- Concentration of each drug (ketamine 75 mg/ml; xylazine 5 mg/ml).
- Expiration date (28 days after preparation).
- Working solution Unique Identifier

Osmotic Pumps

If your research involves the use of mini osmotic pumps, please note that the make, model, and size of the Pump must be specified in the surgical description within your IACUC protocol.

For protocols that already have approval for osmotic pump use, but do not include this information, your Research Liaison will contact you to request a modification be submitted to incorporate these details.

This update ensures accurate review of surgical procedures and appropriate oversight of animal welfare considerations. Please reach out to your Research Liaison if you have any questions regarding this requirement.

Updates to Aquatic Policies and Procedures

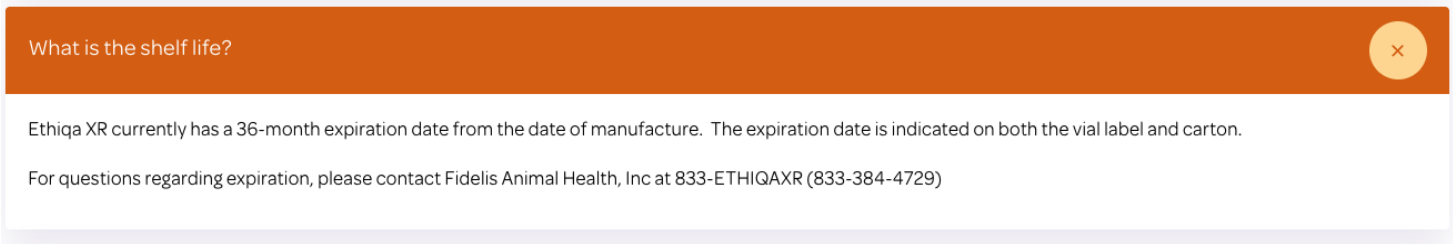
The following policies or procedures have recently been updated and are slated to be updated online in the near future. Current versions of these policies can be found in the Policies, Procedures, Guidelines & Instructions section of the OARS website.

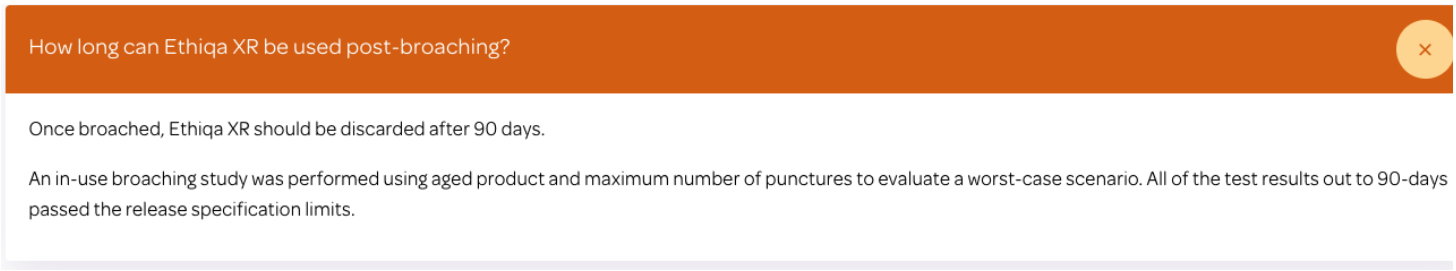
1. The "Fin Clipping of Zebrafish" standard procedure has updated details for housing post-procedure to provide specific guidelines for fish kept in stagnant vs. recirculating tanks. Zebrafish should be returned to normal system tanks as soon as possible, no longer than 72 hours if kept in stagnant tanks or 2 weeks if kept on a recirculating system. Please note that this update only pertains to protocols using the "Find Clipping of Zebrafish - Standard" procedure building block.
2. "Environmental Enrichment: Zebrafish" policy has been updated to state zebrafish held for 7 days or less (i.e. for genotyping) are exempt from the Environmental Enrichment policy.
3. "Surgery: Amphibians" policy is in the process of being updated to add details for sterilization of instruments and updates to rest period required for oocyte harvest.

**Reminder Ethiqa XR Expiration for Broached Vials:

The shelf-life for unopened Ethiqa XR is 36 months from the date of manufacture (i.e. manufacturer expiration date). Once the vial has been broached, Ethiqa XR should be

discarded after 90 days. To minimize the use of expired Ethiqa XR, the opening date and/or 90 days expiration date should be written on the vial.





Important Safety Information

For Rats and Mice:

Only administer Ethiqa XR by subcutaneous injection. Ethiqa XR is not intended for intravenous, intra-arterial, intrathecal, intramuscular, or intra-peritoneal injections. Do not use in mice or rats with pre-existing respiratory deficiencies. Do not keep rats on wood chip-type bedding after administration of Ethiqa XR. Use caution with concomitant administration of Ethiqa XR with drugs that cause respiratory depression.

* Remember, Buprenorphine HCl to mice and rats must be administered every 4-6 hours, which will include dosing in the middle of the night. Administration of Ethiqa XR is once every 72 hours.

**Reminder: Communicating with VCS and the Clinical Veterinarians

There have been recent incidents where veterinary orders have not been followed, leading to animal suffering or death. This is a serious noncompliance issue that must be reported to NIH-OLAW and AAALAC.

Clinical veterinarians have the final authority regarding euthanasia decisions and timing. We cannot be clearer on this regulatory requirement. There will be considerably less tolerance for future noncompliance regarding failing to communicate with and comply with directives from the veterinary group. Noncompliance may lead to ***loss of animal work privileges*** *and* ***revoked access*** *to animal facilities.*

***Reminder: Colony Management**

- As previously communicated, please be cognizant of YARC practices concerning non-compliant breeding cages. If weanlings are still present in the cage on the indicated "wean by" date, YARC will separate them. All non-compliant cages (e.g., double litter, harems with litter) will be separated by YARC upon identification. YARC will also intervene on a fee for service basis when:
    - Mouse litter is ≥29 days old
    - Rat litter is ≥22 days old
    - Cage exceeds density limits without proper documentation
    - Double litters or harems with litters are found

To assist with colony management, a software program from Transnetyx called Colony is available, free of charge, to any researchers who pay rodent services to manage their colonies. Utilizing streamlined communication and convenient task management, this software allows you to keep track of your breeding cages using the Colony website or the Colony iOS app, thus facilitating efficient colony management. Further, if you use Transnetyx for genotyping, results will be automatically applied to animal data as soon as they are available.
The Transnetyx team will help you with every step of the way in getting you set up and started in Colony. Contact Yale's representative, Kristin Uyl at kuyl@transnetyx.com, for assistance in getting started.

Effective management involves careful planning, recordkeeping, and adherence to best practices and regulations. This not only benefits the animals but supports the goals of research, conservation, and ethical responsibility.

Policy and Standard Procedure Updates – May through October

Disposition Options: Retirement, Adoption, and Tissue Sharing

- If an IACUC-approved protocol does not require euthanasia, the final disposition of the animal could include the transfer of animals to another research project or collaborating institution, adoption, or retirement.
- In the "Adoption" section, a statement regarding exclusion was added:
    - Species whose ownership is precluded by state law.
    - Animals known to harbor an infectious agent that poses a risk to human or animal health, or have been administered infectious or hazardous agents, will be considered eligible for adoption on a case-by-case basis, in consultation with Environmental Health & Safety (EHS).
- In the "Adoption" section, a statement regarding the adoption process was clarified:
    - Any animal will be surgically sterilized prior to adoption as deemed necessary by the faculty veterinarian on service and in compliance with the agreements in place with the adoption agencies, and/or retirement facilities.
- A few requirements in the "Retirement" section were clarified:
    - The suitability of individual animals will be made by a clinical veterinarian based on prior research use, medical history, and current state of health.
    - Animals known to harbor an infectious agent that poses a risk to human or animal health, or have been administered infectious or hazardous agents, will be eligible for relocation to a sanctuary or retirement facility on a case-by-case basis, and may require consultation with Environmental Health & Safety (EHS).
    - The IACUC will be informed of all retirements.

Animal Care and Use Training Program

- Training for "All Animal Users" has been updated to describe requirements for teaching protocols.
    - Recipients of teaching or training covered by "teaching protocols" are required to complete All Animal Program Personnel training and be medically cleared by Employee Health (see All Animal Users training) to work with animals.
    - Recipients do not need to be listed as personnel on teaching protocols, but all "instructors" must be listed and complete all required training levels as if for a researcher.

Neuromuscular Blocking Drugs

- This policy was reviewed and approved by the IACUC with no changes from the previous version.
- The use of neuromuscular blocking drugs must be scientifically justified and approved by the IACUC. These types of drugs paralyze skeletal muscles without providing analgesia or a loss of consciousness.
- It is known that humans in a conscious state can experience distress during a neuromuscular blockade, therefore NMBDs may only be used in a fully anesthetized animal.

Physical Restraint of Research Animals

- This policy was reviewed and approved by the IACUC with no changes from the previous version.
- According to the Guide for Care and Use of Laboratory Animals, prolonged restraint should be avoided unless it is essential for achieving research objectives and is specifically approved by the IACUC (Guide p. 29).
- Physical restraint is defined as the *"the use of manual or mechanical means to limit some or all of an animal's normal movement for the purpose of examination, collection of samples, drug administration, therapy, or experimental manipulation"* (Guide p. 29).
- The Yale IACUC has determined, by surveying peer institutions, that prolonged restraint is considered physical restraint for a duration of 15 minutes or more. IACUC review and approval of prolonged physical restraint during procedures is required.

Policy and Procedure for Using the Mouse Ascites Method for the Production of Monoclonal Antibodies

- This policy was reviewed and approved by the IACUC with no changes from the previous version.
- Federal guidance discourages the use of the mouse ascites method of monoclonal antibody production because it often causes discomfort, distress, or pain, and since *in vitro* methods are readily available, they should replace the *in vivo* ascites method whenever possible.
- Thus, *in vivo* ascites production must be justified based on scientific need, specifically addressing why alternative methods are unsuitable for achieving the scientific objective.

Death as an Endpoint

- While all studies should employ endpoints that are humane, the IACUC realizes that experimental endpoints in some studies may not be achieved when using a humane endpoint.
- Protocol applications and Modification Requests for experiments utilizing Death as an Endpoint must provide strong scientific justification.

Housing Policy: Rat

- A few requirements in the "Pair Breeding" and "Harem Breeding" section were clarified:
  - **Pair**: If an exceptionally large litter is born, the male may be required to be removed at the discretion of a clinical veterinarian.
  - **Harem**: No more than 2 adults may be housed with a single litter (2 litters in a cage are not permitted without justification and approval from the IACUC).

Maintaining Colonies of Genetically Modified Animals

- The "Institutional Policy" section was updated:
  - Breeding genetically modified animals requires approval by the IACUC. When generating or purchasing genetically modified strains and an abnormal phenotype (anything causing pain, distress, or clinically manifested phenotypes) is expected or identified, the strains must be listed and phenotypes described in the protocol. If no abnormal phenotype is expected or identified, then the individual strain is not required to be listed in the protocol.

Surgery: Amphibians

- The "Survival Surgery" section was updated to list the sterilization requirements that align with the policy for "Surgery: Rodent, Survival, and Non-Survival."
- The "Guidelines for *Xenopus* Oocyte Harvest" requirements were clarified:
  - Five initial oocyte harvests are allowed with a minimum of a two-week rest in between, if alternating sides. If using the same side, a minimum of a four-week rest is required.

Environmental Enrichment: Zebrafish

- The "Institutional Policy" section was updated: Unless scientifically justified and approved in an IACUC protocol, zebrafish must be provided with enrichment from at least 2 of the categories listed below when permanently housed. Zebrafish held for 7 days or less (e.g., genotyping) are exempt from the "Environmental Enrichment" policy. For housing greater than 7 days, environmental enrichment is required as described below.
    - Social housing
    - Live food
        - Brine shrimp – minimum 5 times a week
        - Rotifers
    - Complex environment
        - Artificial plants
        - Substrate or picture of substrate on tank bottom (gravel, sand, marbles)
        - Shelter (PVC pipe)
        - Mirrored tape on tank wall

Standard Procedure Updates

- Blood Collection – Hamsters
- Blood Collection – Mice
- Blood Collection – Rats
- Blood Collection – Guinea Pigs
- Elevated Maze
- Forelimb Grip Strength
- Open Field or Locomotor Activity
- Rotorod Testing

As always, please contact OARS with any questions, suggestions, or concerns.

Happy Fall, Everyone!

~OARS Team